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COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT

REPORT ON THE SECOND SESSION (15-24 May 1995)

Economic and Social Council

Official Records, 1995
Supplement No.11

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NOTE

Symbols of United Nations documents are composed of capital letters combined with figures. Mention of such a symbol indicates a reference to a United Nations document.

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SUMMARY

At its second session, the Commission on Science and Technology for Development considered six main items, including the examination of reports submitted by the panels established at its first session on four substantive themes: technology for small-scale economic activities to address the basic needs of low-income populations; the gender implications of science and technology for developing countries; integrated land management; and the contribution of technologies, including new and emerging ones, to industrialization in developing countries. Other substantive agenda items covered the coordination of activities in science and technology for development; information technologies and their role in the field of science and technology; actions arising from the first session of the Commission, under which the final report of the Ad Hoc Working Group on the Interrelationship between Investment and Technology Transfer of the United Nations Conference on Trade and Development (UNCTAD) was discussed; financing science and technology for development; and the scientific and technological aspects of sustainable development and the conversion of military capacities.

After consideration of the substantive agenda items, the Commission adopted an omnibus resolution entitled "Science and technology for development", that addressed all the major issues discussed at the second session and recommended it for adoption by the Economic and Social Council.

In the above-mentioned resolution, it was suggested that the main substantive theme, the focus of the work of the Commission during the inter-sessional period 1995-1997, would be information technologies and their implications for development. Panels and/or working groups of the Commission would analyse and make recommendations on a number of issues related to information technologies, such as the application of information technologies in different groups of countries; the relevance of information technologies for the reduction of environmental degradation and for meeting basic human needs; their effects on social cohesion, economic growth and cultural values; and the public policy, legal, regulatory, institutional, financial, market, human resource and infrastructural requirements for the diffusion and application of information technology.

Furthermore, under the resolution the Council would request the Commission and UNCTAD to liaise in establishing a programme of country reviews on science, technology and innovation policy for interested countries, and would request the Commission to consider the provision of the necessary support for carrying out such reviews. The resolution would also provide for continuation, by the Commission and other organizations of the United Nations system, of a number of activities initiated at the first session, in particular in the areas of endogenous capacity-building; technology for basic needs; the gender implications of science and technology; land management; the conversion of military capacities; and the strengthening of linkages between research and development systems and industry. It would also be recommended that the secretariat initiate research on scientific and technological aspects of sustainable energy systems that might be considered by the Commission at its next session in defining its future work programme.

Having discussed the issue of the coordination of activities in science and technology for development, the members of the Commission recommended that

such coordination be maximized in the Commission's substantive inter-sessional work by ensuring that that work was actively linked with the work of competent United Nations organs and agencies, as well as the work of other multilateral organizations.

As to the coalition of resources for science and technology, the Council would recommend that that coalition focus on specific themes and common goals among recipients, donors and international financing institutions. The Commission would provide a forum for exchanging views and interaction among partners from different networks and coordination schemes, either as a segment of its biennial sessions or as an inter-sessional activity.

Noting the efforts of the Commission to adopt a new working style, under the resolution the Council would reiterate that the responsibility for the implementation of the Commission's programme rested with the members of the Commission. The Secretary-General of the United Nations would be requested to provide the necessary resources for the Commission's inter-sessional work.

Under the resolution, the Council would recommend that all Governments adopt a Declaration of Intent on Gender, Science and Technology for Sustainable Human Development and conduct reviews of national situations. In that context, the Commission established in its resolution 2/1 an Advisory Board on Gender Issues to facilitate future work on the gender implications of science and technology. In its resolution 2/2, the Commission decided to promote and authorize the broadest possible dissemination of the substantive contents of the reports and background documentation of its panels and working groups.

The Commission also adopted decision 2/101 on its working methods, in which it aimed at a more efficient use of existing resources and better communication between its secretariat and States members. In decision 2/102, the Commission drew the attention of the Council to the problem created by the lack of synchronization of the terms of Commission members with the timing of the third session and recommended that the Council take steps to resolve it.

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Chapter I

MATTERS CALLING FOR ACTION BY THE ECONOMIC AND SOCIAL COUNCIL OR BROUGHT TO ITS ATTENTION

A. Draft resolution

1. The Commission on Science and Technology for Development recommends to the Economic and Social Council the adoption of the following draft resolution:

DRAFT RESOLUTION

Science and technology for development*

The Economic and Social Council,

Recognizing the unique role of the Commission on Science and Technology for Development as a global forum for the examination of science and technology questions, for improving understanding of science and technology policies for development and for the formulation of recommendations and guidelines on science and technology matters within the United Nations system, all in relation to development,

Recognizing further that the Commission, in carrying out its work, should pay special attention to the needs and requirements of developing countries, in particular the least developed countries, and that it should also take into consideration the relevant problems of countries with economies in transition,

Noting the efforts of the Commission to adopt a new working style consisting of panels and working groups that take advantage of the available expertise of representatives of Member States of the Commission and have responsibility for preparing draft reports for consideration by the Commission,

Taking note with appreciation of the reports prepared by the panels and working groups of the Commission, pursuant to decisions taken at its first session, entitled "Science and technology for basic needs: a bridge", 1/ "Science and technology for sustainable human development: the gender dimension", 2/ "Science and technology for integrated land management" 3/ and "Strengthening of linkages between the national research and development systems and industrial sectors", 4/ and the recommendations contained therein,

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* For the discussion, see chap. II.

1/ E/CN.16/1995/2.

2/ E/CN.16/1995/3.

3/ E/CN.16/1995/4.

4/ E/CN.16/1995/8.

Noting also the other relevant documentation submitted to the Commission on Science and Technology for Development for consideration at its second session, 5/

Recognizing the need to focus the future inter-sessional activities of the Commission on a limited number of substantive themes,

Recognizing further that information and communication are important requisites for planning, development and decision-making in science and technology, and also recognizing the far-reaching implications of information technologies for society,

Basic needs, gender, land management, research and development, industrialization, coordination, financing and other matters arising from the first session of the Commission and future work programme for the inter-sessional period 1995-1997

1. Invites Governments to undertake systematic reviews of each major component of their macroeconomic policy frameworks and to take measures to address any unwarranted disincentives for healthy and progressive informal and small and medium-sized productive sectors, and to create an enabling environment for the scientific and technological community to take initiatives to link technologies, in a participatory manner, with entrepreneurs from those sectors;

2. Decides to draw the attention of States members to the importance of targeted research and development and the application of science and technology knowledge in helping to satisfy basic needs, requests the relevant United Nations bodies and donor organizations to assist interested countries in formulating policies and action plans to implement, evaluate and improve efforts for that purpose, and requests the States members relevant organizations to report on the outcome of those endeavours to the Commission on Science and Technology for Development at its third session;

3. Decides that the Commission should assist the United Nations system in identifying and promoting replicable demonstration activities and programmes, involving different countries from diverse regions, that apply science and technology to the satisfaction of basic needs, and recommends that the operational mechanisms of the United Nations system (including the Department for Development Support and Management Services of the United Nations Secretariat, the regional economic commissions and other relevant organizations, such as the United Nations Development Programme), disseminate information and facilitate the application of science and technology in meeting basic needs;

4. Recognizes that the role of the United Nations in promoting better awareness of relationships between gender and science and technology is crucial, and requests the Secretary-General and organs and entities of the United Nations to consider and take the necessary action to implement the recommendations 6/ addressed to the United Nations system contained in the report of the Panel on the Gender Implications of Science and Technology for Developing Countries, entitled "Science and technology for sustainable development: the gender

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5/ E/CN.16/1995/5, 6, 7 and 9-13.

6/ E/CN.16/1995/3, para. 35, recommendations 1-7.

dimension", and to report thereon to the Commission on Science and Technology for Development at its subsequent sessions;

5. Recommends that all Governments adopt the "Declaration of Intent" on Gender, Science and Technology for Sustainable Human Development, which is contained in the annex to the present resolution, conduct reviews of the national situation regarding gender and science and technology through special committees within or outside existing suitable mechanisms, formulate action plans, and report publicly and to the Commission on progress in achieving the goals of the "Declaration of Intent" by the end of 1996 and 1998, and calls upon donor countries and agencies to assist the follow-up activities of the committees;

6. Recommends that the principles contained in the report of the Panel on the Science and Technology Aspects of the Sectoral Issue to be discussed by the Commission on Sustainable Development in 1995, entitled "Science and technology for integrated land management" 7/ be further elaborated to provide guidelines for the application of technologies that support integrated land management under site and region-specific conditions, and, for that purpose, invites the Food and Agriculture Organization of the United Nations, the United Nations Environment Programme, the United Nations Centre for Human Settlements (Habitat) and the International Fund for Agricultural Development, in cooperation with the regional commissions, where appropriate, to elaborate such guidelines and work together with a view to designing programmes to address specific land management problems and assisting developing countries and economies in transition in implementing such programmes and sharing the information thus obtained;

7. Notes that the research and development systems in most developing countries, in particular the least developed countries as well as in some countries with economies in transition, do not provide sufficient support to the improvement of sustainable industrial development in those countries, and recommends that the international community, through multilateral and bilateral aid and, generally, through the enhancement of linkages with enterprises, universities, foundations, research institutes, scientific laboratories, trade and professional associations, and other channels and mechanisms for international scientific and technological cooperation, should strengthen its support for countries undertaking reforms in their research and development systems and their efforts in building innovative capacities;

8. Requests Governments and intergovernmental and non-governmental organizations to give priority to effective access to networks, such as the Internet, by scientific and technical institutions in developing countries, in particular the least developed countries, as well as countries with economies in transition, through the provision of technical as well as other support for related investments, and to facilitate appropriate electronic communication among institutions engaged in science and technology for development;

9. Requests the Commission on Science and Technology for Development and the United Nations Conference on Trade and Development to liaise in establishing a programme of country reviews on science, technology and innovation policy for interested countries, also requests the Commission to consider providing advisory inputs, analytical support and evaluation, as need be, in the carrying out of such country reviews, and further requests the United Nations Development Programme to explore the possibilities of contributing to funding such activities from its centrally controlled resources.

7/ See E.CN.16/1995/4.

10. Recognizes that technological capacity-building is a major factor in the process of effective technology transfer and long-term growth, and invites the United Nations system and the international community to support the implementation of projects specially designed to foster technological capacity-building in interested countries, including least developed countries;

11. Recalls the agreed conclusions/1994/1 of the Economic and Social Council on coordination of the policies and activities of the specialized agencies and other bodies of the United Nations system related to science and technology for development and, in that context, decides that the Commission on Science and Technology for Development, in its substantive work should maximize coordination in undertaking its inter-sessional studies on specific issues by relating actively to competent United Nations organs and agencies, as well as other multilateral organizations;

12. Decides that the Commission, in reviewing the activities of the United Nations system in science and technology, should highlight innovative programme concepts and designs of common interest and bring them to the attention of the science and technology community, with an indication of their resource implications, and should use them as a basis for building ad hoc resource coalitions;

13. Decides that the main substantive theme that will constitute the focus of the work of the Commission on Science and Technology for Development during the inter-sessional period 1995-1997 will be information technologies and their implications for development;

14. Decides further to set up panels and/or working groups to analyse, elaborate and make recommendations on issues related to information technologies, possibly including:

(a) Analysis of the application of information technologies in different groups of countries with a view to making recommendations to enhance the diffusion of information technologies in key sectors of their economies;

(b) The implications of the revolutionary improvements in the cost effectiveness of information technologies for the development of a global information infrastructure;

(c) Implications for the promotion of sustainable development, including the sustainable use of natural resources and reduction of environmental degradation;

(d) The implications of such improvements for more effectively meeting basic human needs, such as education, health, water and food;

(e) The effects of information technology on social cohesion, economic growth and cultural values, including such issues as gender, employment, small-scale economic activities, production capability, improved governance and increased participation in the decision-making process;

(f) Public policy, legal, regulatory, institutional, financial, market, human resource and infrastructural requirements for the diffusion and application of information technology;

(g) Examination of the programmes of the organs, organizations and bodies of the United Nations system that relate to the global information

infrastructure and their impacts, and the ways in which improved coordination as well as new avenues to be opened up for the coalition of resources could better assist developing countries and countries with economies in transition in gaining more effective access to information technology and participating to a greater extent in the development and application of information technology;

(h) Assessment of experiences and progress made with regard to access to networks; 8/

15. Notes the recommendations adopted at the Consultative Meeting on a Coalition of Resources for Science and Technology for Development, 9/ and recommends that, at the international level, a coalition of resources should focus on specific themes and common goals among recipients, donors and international financing institutions, including the World Bank and the regional development banks. Such themes and common goals should be based on voluntary and informal mechanisms that promote the full interaction of both donors and recipients. The feasibility of building science and technology into existing and broader coordination schemes should be considered. The Council further recommends that the Commission on Science and Technology for Development should provide a forum for exchanging views and interaction among partners of different networks and coordination schemes in the area of science and technology for development, drawing lessons from past experience in that area. Such a forum could be held either as a segment of its biennial sessions or as an inter-sessional activity, as required and defined by the Commission on Science and Technology for Development in consultation with relevant United Nations entities and international organizations;

16. Welcomes the important contribution to the work of the Commission on Sustainable Development made by the Commission on Science and Technology for Development in the area of integrated land management, and invites the Commission on Science and Technology for Development to continue contributing substantively and constructively to the work of the Commission on Sustainable Development on the science and technology components of Agenda 21;

17. Further invites the Commission on Science and Technology for Development to give consideration to ways and means of taking advantage of the twentieth anniversary of the Vienna Conference on Science and Technology for Development for the formulation of a common vision for the future contribution of science and technology for development;

18. Recognizes the importance of clean and safe energy technologies in the pursuit of sustainable development, and recommends that the Commission secretariat, in consultation with the Committee on the Development and Utilization of New and Renewable Sources of Energy and other relevant international bodies, submit to the Commission on Science and Technology for Development at its third session an issues note that should identify scientific and technological aspects of sustainable energy systems that might be considered by the Commission in defining its future work programme;

19. Takes note of the report by the UNCTAD secretariat entitled "Scientific and technological aspects of the conversion of military capacities

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8/ See paragraph 8 of the present resolution.

9/ See E/CN.16/1995/11.

for civilian use and sustainable development: an overview of the main issues", 10/ and recommends the continuation of the work of the Commission on Science and Technology for Development on scientific and technological aspects of the conversion of military capacities in close cooperation with other relevant bodies of the United Nations system and with other organizations;

20. Expresses its appreciation to the Commission secretariat for its work in preparing timely and substantive documentation for the second session, and reiterates its earlier decision that responsibility for implementation of the Commission's programme rests with members of the Commission on Science and Technology for Development and that the secretariat is responsible for servicing the Commission. Furthermore, it emphasizes that the Commission should implement its future work programme and its priorities in a transparent manner;

21. Requests the Secretary-General to provide the necessary resources for convening at least four inter-sessional ad hoc panels/workshops on specific issues in the field of science and technology, which will provide crucial input into the work of the Commission in terms of independent, specialized and expert advice;

22. Recognizes with appreciation the financial contributions made by Governments, foundations, institutions and individual donors to the work of the panels, as well as the important support received to that end from individuals, experts and non-governmental groups and United Nations entities, and encourages them and all appropriate institutions to continue and enhance their support of the activities of the Commission on Science and Technology for Development in its inter-sessional period 1995-1997.

Annex 11/

DECLARATION OF INTENT ON GENDER, SCIENCE AND TECHNOLOGY FOR SUSTAINABLE HUMAN DEVELOPMENT

All Governments agree to work actively towards the following goals:

1. To ensure basic education for all, with particular emphasis on scientific and technological literacy, so that all women and men can effectively use science and technology to meet basic needs.

2. To ensure that women and men have equal opportunities to acquire advanced training in science and technology and to pursue careers as technologists, scientists and engineers.

3. To achieve gender equity within science and technology institutions, including policy and decision-making bodies.

4. To ensure that the needs and aspirations of women and men are equally taken into account in the setting of research priorities and in the design, transfer and application of new technologies.

10/ E/CN.16/1995/13.

11/ See para. 5 of the draft resolution.

5. To ensure that all women and men have equal access to the information and knowledge, particularly scientific and technological knowledge, that they need to improve their standard of living and quality of life.

6. To recognize local knowledge systems, where they exist, and their gender-specific nature as a source of knowledge that is complementary to modern science and technology and is also valuable for sustainable human development.

B. Draft decision

2. The Commission on Science and Technology for Development recommends to the Economic and Social Council the adoption of the following draft decision:

DRAFT DECISION

Report of the Commission on Science and Technology for Development on its second session and provisional agenda and documentation for the third session of the Commission*

The Economic and Social Council,

(a) Takes note of the report of the Commission on Science and Technology for Development on its second session, and endorses the resolutions and decisions adopted by the Commission, 12/

(b) Approves the provisional agenda and documentation for the third session of the Commission set out below:

PROVISIONAL AGENDA AND DOCUMENTATION FOR THE THIRD SESSION OF THE COMMISSION

1. Adoption of the agenda and other organizational matters

2. Substantive theme: Information technologies

Documentation

Reports on panels/working groups on information technologies

3. Science and technology policy reviews

Documentation

Note on progress in science, technology and innovation policy reviews

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* For the discussion, see chap. IX.

12/ Official Records of the Economic and Social Council, 1995, Supplement No. 11 (E/1995/31).

4. Action arising from the second session

Documentation

(a) Comprehensive note on implementation and progress made on decisions taken at the second session of the Commission, including follow-up work on technology for basic needs, gender and sustainable development

(b) Report on activities on science and technology for development: coalition of resources

(c) Issues note on energy technology

5. Consideration of ways and means of commemorating in 1999 the twentieth anniversary of the Vienna Conference on Science and Technology for Development

Documentation

Note by the Secretariat

6. Role and activities of the Commission regarding the coordination of science and technology for development

Documentation

Note by the Secretariat

7. Election of the chairperson and other officers for the fourth session of the Commission

8. Provisional agenda and organization of work of the fourth session of the Commission

9. Other matters

10. Adoption of the report of the Commission on its third session

C. Resolutions and decisions brought to the attention of the Council

3. The following resolutions adopted by the Commission are brought to the attention of the Economic and Social Council:

Resolution 2/1. Advisory Board on Gender Issues*

The Commission on Science and Technology for Development,

Noting the report of the Panel on the Gender Implications of Science and Technology for Developing Countries, entitled "Science and technology for

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* For the discussion, see chap. II.

sustainable human development: the gender dimension", 13/ in particular recommendation 8 (para. 35),

Having considered the gender dimension of science and technology for development and in order to fulfil its responsibility in that area,

Decides to set up, for a duration of four years and on the basis of extrabudgetary resources, an Advisory Board on Gender Issues as an expert group to facilitate both the future deliberations of the Commission and the follow-up to the recommendations on the gender implications of science and technology for developing countries, on which the Board should report to the Commission at its third and fourth sessions.

Resolution 2/2. Dissemination of and public awareness on reports of main panels of the Commission on Science and Technology for Development*

The Commission on Science and Technology for Development,

Noting the important work undertaken by the panels and working groups established at the first session of the Commission and the ensuing substantive discussions on their findings and recommendations that took place at the second session,

Decides to promote and authorize the broadest dissemination of the substantive contents of the reports and background documentation of the panels and working groups, through appropriate channels. In pursuit of that objective, such dissemination should follow the general principles and guidelines of United Nations publications, acknowledging that the contents represent the views of the respective experts and that their work was conducted under the auspices of the Commission on Science and Technology for Development.

4. The following decisions adopted by the Commission are brought to the attention of the Economic and Social Council:

Decision 2/101. Working methods of the Commission on Science and Technology for Development**

At its second session, on 24 May 1995, the Commission on Science and Technology for Development, drawing on its experience, decided, in implementing its work programme, to:

(a) Perform its work within existing resources, including extrabudgetary funds made available for those purposes, with the support of the Commission secretariat;

(b) Make full use of any expertise voluntarily made available to the Commission;

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* For the discussion, see chap. II.

** For the discussion, see chap. X.

13/ E/CN.16/1995/3.

(c) Avoid unnecessary duplication of work being carried out in the related fields by international organizations;

(d) Carry out the envisaged work programme through panels, experts, or working groups.

For the purpose of ensuring transparency, the Commission requested each member State to appoint a focal point, it being understood that, for that purpose, representatives of each of the member States participating in the Commission would be considered as such unless the Commission secretariat was notified otherwise.

The Commission recommended that its secretariat examine all means of communication and make the necessary arrangements, within existing resources, to maintain efficient, rapid and regular contact with members of the Commission, and provide them with available advance information on priorities, reports, forecasts, resources and other elements that would facilitate active participation in the work of the Commission, including the working groups and panels that might need to be established to implement the Commission's work programme.

The Commission decided that any extrabudgetary funds provided by members of the Commission, by Governments or other organizations, unless otherwise stipulated, should be provided and used in accordance with the established financial rules and regulations of the United Nations.

The Commission requested that the secretariat provide a report to the Commission showing utilization of all resources (including extrabudgetary and budgetary resources) made available for the implementation of the work programme of the Commission as with effect from the end of its second session. It should also provide a proposed spending plan to the Commission on an annual basis, indicating in detail its proposed expenditures and allocation of resources for the work programme, and should provide a six-monthly progress report on both the work programme and its financial aspects.

Decision 2/102. Synchronization of the terms of members of the Commission on Science and Technology for Development*

At its second session, on 24 May 1995, the Commission on Science and Technology for Development decided to call the attention of the Economic and Social Council to the problem created by the lack of synchronization of the term of Commission members elected by the Economic and Social Council with the timing of the third session of the Commission, and to recommend that the Council, seized of this problem, take steps to resolve it to ensure the continued efficient functioning of the Commission.

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* For the discussion, see chap. X.

Chapter II

SUBSTANTIVE THEMES: TECHNOLOGY FOR SMALL-SCALE ECONOMIC ACTIVITIES TO ADDRESS THE BASIC NEEDS OF LOW-INCOME POPULATIONS; THE GENDER IMPLICATIONS OF SCIENCE AND TECHNOLOGY FOR DEVELOPING COUNTRIES; THE SCIENCE AND TECHNOLOGY ASPECTS OF THE SECTORAL ISSUE TO BE DISCUSSED BY THE COMMISSION ON SUSTAINABLE DEVELOPMENT IN 1995

1. The Commission considered item 2 of its agenda at its 2nd to 5th meetings, on 16 and 17 May 1995, and at its 13th meeting, on 24 May 1995. It had before it the following documents:

(a) Report of the Panel on Technology for Small-scale Economic Activities to Address the Basic Needs of Low-income Populations, entitled "Science and technology for basic needs: a bridge" (E/CN.16/1995/2);

(b) Report of the Panel on the Gender Implications of Science and Technology for Developing Countries, entitled "Science and technology for sustainable human development: the gender dimension" (E/CN.16/1995/3);

(c) Report of the Panel on the Science and Technology Aspects of the Sectoral Issue to be discussed by the Commission on Sustainable Development in 1995, entitled "Science and technology for integrated land management" (E/CN.16/1995/4);

(d) Overview of the reports of panels (E/CN.16/1995/5).

2. At the 2nd meeting, on 16 May, the Chairman of the Panel on Technology for Small-scale Economic Activities to Address the Basic Needs of Low-income Populations made a presentation to the Commission.

3. At the same meeting, the Officer-in-Charge of the Division for Science and Technology of the United Nations Conference on Trade and Development (UNCTAD) made an introductory statement.

4. At the same meeting, statements were made by the representatives of Colombia (on behalf of the Group of 77 and China), Japan, Pakistan, the Marshall Islands, China, the United States of America, Bulgaria, Colombia, Denmark, Romania, Chile and Brazil, as well as by the observer for Afghanistan.

5. At the same meeting, statements were also made by the representatives of the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Health Organization (WHO) and the United Nations Industrial Development Organization (UNIDO).

6. At the same meeting, the representatives of the Economic and Social Commission for Asia and the Pacific, and the Economic Commission for Africa made statements.

7. At the 3rd meeting, on 16 May, statements were made under agenda item 2 (a) by the representatives of the Food and Agriculture Organization of the United Nations (FAO) and the International Labour Organization (ILO), as well as by the observer for the Economic and Social Commission for Western Asia.

8. At the same meeting, the Science and Technology Adviser to the President of the International Development Research Centre (Ottawa, Canada) made an introductory statement under agenda item 2 (b).

9. At the same meeting, statements were made by the representatives of Pakistan, the Marshall Islands, Denmark, Colombia, Jamaica, Germany, the United States of America, Japan, China, Chile, the Russian Federation and Togo.

10. At the same meeting, statements were also made by the representatives of FAO, the International Atomic Energy Agency (IAEA) and WHO.

11. At the 4th meeting, on 17 May, a member of the Panel on the Science and Technology Aspects of the Sectoral Issue to be discussed by the Commission on Sustainable Development in 1995 addressed the Commission under agenda item 2 (c).

12. At the same meeting, statements were made by the representatives of China, Saudi Arabia, the Netherlands, the Marshall Islands, Japan, Bulgaria, Jordan, Viet Nam, Pakistan, Chile, the Russian Federation, Austria, Jamaica, Spain, the United States of America, India, Burundi, Morocco and Ireland, as well as by the observer for Afghanistan.

13. At the same meeting, the representative of FAO made a statement.

14. At the same meeting, a representative of the Department for Policy Coordination and Sustainable Development of the United Nations Secretariat made a statement.

15. At the 5th meeting, on 17 May, the representative of Belarus made a statement.

16. The Chairman's summary of the general discussion is set out below.

Chairman's summary of the general discussion

Technology for small-scale economic activities to address the basic needs of low-income populations

The Panel on Technology for Small-scale Economic Activities to Address the Basic Needs of Low-income Populations had taken a pragmatic and pluralistic outlook in its work. It considered six basic pillars as essential in its discussion: education, access to information, participation, health, basic infrastructure and small-scale economic activities. Basic needs deficits and their underlying causes became serious impediments to sustainable economic development. Persistent poverty was leading to social instability and the destruction of the environment throughout the world. Yet science and technology strategies often neglected the needs of the poor, thus widening existing inequalities. The involvement of the scientific and technological community and of a broad cross-section of society should be sought in addressing basic needs. Such needs necessitated the increased and urgent awareness of decision makers.

The relationships between technological progress and alleviation of poverty among the world's poorest were often subtle and not easily explained. One of the challenges to be faced was to convince those who

allocated resources that investments in technology in the service of low-income populations were both wise and crucial. The Panel concept of a bridge or bridging mechanism between the very poor and their access to technology was generally supported, as well as the need to promote technology strategies involving the six above-mentioned pillars. References were made to the integrative nature of the issue of basic needs as well as to the outcome of United Nations conferences dealing with aspects of the issue from different perspectives. Specialized agencies and regional commissions commented on the report based on their specific experiences and referred to major related United Nations events, such as events dealing with social development and food production.

It was stressed by some members that any strategy for bringing technologies to the poor could not rely exclusively on market forces but needed effective mechanisms to support such efforts. The Panel had deliberately chosen to concentrate on technology strategies, approaches and policies rather than on specific technologies.

The Panel recommendations for action concerning science and technology policies for basic needs were discussed. An examination was made of those policies to determine how effectively they (a) addressed basic needs satisfaction, (b) supported the technological upgrading of small and medium-sized enterprises, and (c) strengthened the networking of science and technology institutions and enterprises.

The recommendations as a whole were appreciated and endorsed and some specific recommendations were left for further analysis at a later stage.

The gender implications of science and technology for developing countries

The work of the Panel on the Gender Implications of Science and Technology for Developing Countries led to the production, in addition to the above-mentioned report, of 12 background reports forming the basis of a book to be published in September 1995. The two main conclusions, which were not new, were that (a) the participation of girls in scientific and technological disciplines and of women in science and technology careers varied considerably from country to country but was less than that of men, and (b) in many sectors, development programmes with a high science and technology component designed for everyone had not sufficiently recognized the gender-specific nature of development. The Panel, on the basis of its conclusions, had produced a check-list of transformative actions in seven key areas that it considered of particular relevance to be transmitted to all developing country Governments for their consideration. It had also made two key recommendations, requesting every country to sign a declaration of intent on gender equity in science and technology and to establish an ad hoc committee to review its own situation and make recommendations to the Government on issues identified in the declaration. The members of the Commission expressed their satisfaction with the report and their agreement with the contents of the declaration of intent, which had already begun to be implemented in several of their countries. They expressed the view that the Panel report would make a useful contribution to the Fourth World Conference on Women.

It was pointed out that an attempt had been made to avoid overloading Panel recommendations with a call for numerous specific actions. However,

the subsequent consultative process could consider specific actions on a country-to-country basis, as appropriate.

It was noted that there were signs in some parts of the developing world that girls were already overtaking boys in the study of scientific disciplines. A number of views were presented on the possible reasons behind that phenomenon, such as the perception that scientific careers were no longer as rewarding for men as they had been in the past and that women were moving in to fill the gap. The report provoked speculation about whether women thought differently about science than men, whether science and technology would be different if there were more women scientists, and whether different priorities would emerge for science and technology if more women were made responsible for managing them.

The members of the Commission discussed the recommendation of the Panel in its report that an advisory board on gender and technology be set up to ensure that gender issues would be adequately addressed in the Commission's future deliberations.

As regards equity, Commission members expressed the view that the United Nations should employ more women at an appropriately high level and inquired about progress in that area. Moreover, it was felt that there should be flexibility in setting quantitative targets for improving the participation of women in science and technology activities, both generally and in the United Nations, and that it was better to set achievable targets than to aim too high and cause frustration.

The discussion also addressed the issue of how science and technology could be reoriented towards the problem of women in development, in particular as regards poverty, which marginalized women more than men. In that connection, more attention could be given to the gender aspects of science and technology in rural development. As to health, it was noted that, although the relative number of women health workers had risen to high levels, women were still receiving poorer health care than men and it was only recently that women had begun to participate in the formulation of health policy.

The Commission also expressed the view that the positive results of the new working style exemplified by the work of the panels made it desirable to extend the same methodology to the treatment of future themes.

Science and technology for integrated land management

There was a role to be played by science and technology, in particular in reviewing and further advancing the progress made in the implementation of chapter 10 of Agenda 21, which dealt with integrated land management. The Commission on Sustainable Development had taken note with appreciation of the above-mentioned report on the Panel on Science and Technology Aspects of the Sectoral Issue to be discussed by the Commission on Sustainable Development in 1995 on the subject, which had added an important dimension in furthering the implementation of chapter 10.

Integrated land management was viewed as a continuous iterative process of planning, implementation, monitoring and evaluation that made it possible to manage environmentally sensitive sectoral and cross-cutting issues, such as urbanization, population, desertification, deforestation,

soil erosion, salination, sustainable agriculture, and the pollution of fresh and sea-water resources. A set of principles and a framework for policy-making, including the identification of potential areas for future action, were elaborated; for implementation, they would need to be adapted to specific country conditions, since land-management problems, needs and solutions were specific to each country.

Specific areas in science and technology that supported information needs, the evaluation of land-use options, solutions of specific management problems and the development of infrastructure, including education and training, were emphasized. The role of science and technology should be seen in the overall social and cultural context involving all stakeholders, particularly women. Although considerable information and technological know-how was available from developed countries on such issues, they were not always appropriate for developing countries and countries in transition that faced national or regional-specific problems. Even when the technology was appropriate, the recipient countries often did not have the necessary absorptive capacities for successful transfer.

Specific constraints were also identified, including limited access to appropriate information and technology, a lack of funding, the pressure of competing land uses, inadequate institutional infrastructure, insufficient research and development, and a lack of common goals and principles. Those problems should be addressed in conjunction with the improvement of training and the development of human resources and absorptive capacity. The linkages between integrated land management and the issues discussed under the other two substantive themes of the session (the basic needs of low-income populations in developing countries and countries with economies in transition, and the gender implications of science and technology) were also emphasized.

To overcome the above-mentioned problems and constraints, such measures such as the pooling and sharing of resources, expertise and experiences among countries, the development of common goals, the commitment by all partners involved and the setting up of an administrative infrastructure were emphasized, together with partnerships between private and public-sector actors, targeted training and technology support programmes, and direct public investment wherever private sources alone could not meet the diverse and multifaceted needs in that area. Organizations and agencies of the United Nations system, particularly FAO and the International Fund for Agricultural Development (IFAD), were encouraged to focus on applying specific science and technology measures to promote integrated land management in their programmes and activities.

Action taken by the Commission

1. Science and technology for development

17. At the 13th meeting, on 24 May, the Commission had before it a draft resolution (E/CN.16/1995/L.3) entitled "Science and technology for development" submitted by the Chairman on the basis of informal consultations.

18. At the same meeting, before the adoption of the draft resolution, statements were made by the representatives of India and the United States of America.

19. At the same meeting, the Chairman read out revisions to the draft resolution contained in an informal paper.

20. The meeting was adjourned. Upon resumption of the meeting, the Chairman read out a number of further revisions to the draft resolution, as agreed upon in informal consultations.

21. The Commission adopted the draft resolution as further orally revised (for the final text, see chap. I, sect. A, draft resolution).

2. Advisory Board on Gender Issues

22. At the same meeting, the Commission had before it a draft resolution (E/CN.16/1995/L.4) entitled "Advisory Board on Gender Issues" submitted by the Chairman on the basis of informal consultations.

23. At the same meeting, the Commission adopted the draft resolution (for the final text, see chap. I, sect. C, resolution 2/1).

3. Dissemination of and public awareness on reports of main panels of the Commission on Science and Technology for Development

24. At the same meeting, the Commission had before it a draft resolution (E/CN.16/1995/L.5) entitled "Dissemination of and public awareness on reports of main panels of the Commission on Science and Technology for Development", submitted by the Chairman on the basis of informal consultations.

25. The Commission adopted the draft resolution (for the final text, see chap. I, sect. C, resolution 2/2).

Chapter III

COORDINATION OF ACTIVITIES IN SCIENCE AND TECHNOLOGY FOR DEVELOPMENT

1. The Commission considered agenda item 3 in conjunction with agenda item 6 at its 9th meeting, on 19 May 1995. It had before it the following documents:

(a) Note by the Secretariat on coordination mechanisms in science and technology within the United Nations system (E/CN.16/1995/6);

(b) Report by the UNCTAD secretariat on the activities of the United Nations system in the field of science and technology for development, including cooperation in technology assessment (E/CN.16/1995/7);

(c) Note by the UNCTAD secretariat on the consultative meeting on a coalition of resources for science and technology for development (E/CN.16/1995/11).

2. At the same meeting, the Chief of the Human Development, Institutions and Technology Branch, Division of Sustainable Development, Department for Policy Coordination and Sustainable Development of the United Nations made introductory statements on agenda items 3 and 6.

3. At the same meeting, the Officer-in-Charge of the Division for Science and Technology of UNCTAD made an introductory statement under agenda item 3.

4. At the same meeting, statements were made by the representatives of Chile, Jamaica, Pakistan, China, Japan, Germany, India, Netherlands, the United States of America and the Niger.

5. At the same meeting, the representative of the United Nations Development Programme (UNDP) made a statement.

6. The Chairman's summary of the general discussion is set out below.

Chairman's summary of the general discussion

The Commission on Science and Technology for Development fully considered the agreed conclusions of the Economic and Social Council 1994/1 and the above-mentioned reports on coordination. The more direct and interactive relationship between the Commission on Science and Technology for Development and the Commission on Sustainable Development that had been recommended by the Council was seen to be useful and it was considered that the implementation of Agenda 21 could provide positive examples of coordination, particularly the experience of the Inter-Agency Committee on Sustainable Development of the Administrative Committee on Coordination.

In reviewing the science and technology-related activities reported by the agencies of the United Nations system, the Commission noted that the possibilities for overlapping mandates and programmes could not be excluded, although agencies approached science and technology issues from different sectoral perspectives. The purpose of coordination should be to promote the complementarity of various activities while avoiding duplication as much as possible.

In pursuing its substantive programme of work, the Commission felt that the issue of coordination should be kept in mind in order to make appropriate recommendations to the Economic and Social Council on any issue that lent itself to coordination at the local, regional or international levels with respect to science and technology. Clear criteria for that purpose needed to be identified. The regional commissions were encouraged to follow up on the policy advice of the Commission after endorsement by the Council.

The Commission recognized the generally diminishing level of the donor resources that were available for development cooperation in general and science and technology in particular. In that regard, the Commission welcomed the outcome of the Consultative Meeting on a Coalition of Resources for Science and Technology for Development, which had included a call for multiple coalitions of resources at the international level that should focus on specific themes and common goals among donors and recipients and should build on existing schemes and initiatives.

While the specific use of the term "science and technology" had apparently been less frequent in some organizations, the Commission noted that such organizations in fact remained deeply involved in science and technology through their sectoral programmes and activities. Given the shortage of funds available for science and technology for development, support for good projects identified might be requested from the regional and interregional programme funds that were provided by various international funding sources, particularly the United Nations Development Programme through its Governing Council. A useful idea that could be proposed for funding might be to set up science and technology country policy dialogue projects aimed at improving national science and technology policies, in which the involvement of funding agencies and the regional economic commissions would be essential.

The Commission recognized the need to reorient the existing lending policies of bilateral and multilateral financial institutions so as to tap their full potentials for supporting science and technology activities for development. They might be encouraged to redirect their funds to new initiatives, such as promoting technology partnerships between the private sector and research and development institutions or diffusing environmentally sound technologies.

The shortage of resources was sometimes due to their misapplication and unproductive concentration or to conditionalities surrounding their use. The Commission felt that it was important for countries to take the initiative themselves in developing coalitions of resources at the national level that did not need to be of a purely financial nature.

A role for the Commission in coordination could be to stimulate global thinking and system building on chosen topics, such as information technologies, in order to devise programmes of a multilateral nature that would be instrumental in mobilizing resources from all available sources.

The Commission accepted the challenge that had been posed by the consultative meeting to organize a forum for an informal exchange of views among partners of different networks and coordination schemes that should include development banks, the private sector and non-governmental organizations as a segment of its future sessions. While the implications for the members and secretariat of the Commission of organizing such a

forum had to be carefully studied in terms of the additional time and effort that would be involved, such a forum would add a unique feature to the work of the Commission.

As to the possibility of setting up a small task force to examine the categorization of science and technology activities for reporting purposes, including the identification of essential parameters, it was suggested that UNESCO might be requested to undertake such a task and report back to the Commission.

Action taken by the Commission

Science and technology for development

7. See chapter I, section A, draft resolution and also chapters II, IV, V, VI and VII.

Chapter IV

REPORTS OF THE AD HOC PANELS

1. The Commission considered item 4 at its 6th and 7th meetings, on 18 May 1995, and at its 13th meeting, on 24 May 1995. It had before it the following documents:

(a) Report of the Panel of Experts on the Contribution of Technologies, including New and Emerging Technologies, to Industrialization in Developing Countries entitled "Strengthening of linkages between the national research and development systems and industrial sectors" (E/CN.16/1995/8);

(b) Note by the UNCTAD secretariat on information technologies for development (E/CN.16/1995/9 and Corr.1 and 2).

2. At the 6th meeting, the Vice-Chairman (Egypt) of the Commission made an introductory statement.

3. At the same meeting, statements were made by the representatives of Romania, Uruguay, the United Republic of Tanzania, Bulgaria, Jamaica, Ukraine, Belarus, the Russian Federation, Pakistan, Viet Nam, Chile, the United Kingdom of Great Britain and Northern Ireland, Burundi, the United States of America and the Netherlands.

4. At the same meeting, statements were also made by the representatives of UNESCO and UNIDO as well as the observers for the Economic and Social Commission for Asia and the Pacific, the Economic Commission for Africa, and the Economic and Social Commission for Western Asia.

5. At the 7th meeting, on 18 May, the Officer-in-Charge of the Division for Science and Technology of UNCTAD made an introductory statement.

6. At the same meeting, statements were made by the representatives of Belarus, Austria, the United Kingdom of Great Britain and Northern Ireland, Chile, Netherlands, Jamaica, the United States of America, China, Japan, the Russian Federation, Denmark, Colombia and Ethiopia.

7. At the same meeting, the representative of the Economic Commission for Africa made a statement.

8. The Chairman's summary of the general discussion is set out below.

Chairman's summary of the general discussion

Research and development and industrialization

The Panel of Experts on the Contribution of Technologies, including New and Emerging Technologies, to Industrialization in Developing Countries focused its attention on the strengthening of linkages between national research and development systems and industrial sectors. It was highlighted that the excellent work completed in one meeting represented a very cost-effective task. The panel discussions confirmed the finding that research and development systems lacked the capacity to contribute significantly to the industrialization process in the majority of

developing countries and countries with economies in transition. The review of a number of common weaknesses of research and development systems in those countries was appreciated and a consensus was reached on needed reforms and the importance of an adequate enabling environment, including the increased integration of policies into overall science and technology strategies; the reorientation of research and development institutes to make them more demand-driven through, inter alia, the provision of extension services that would be of particular benefit to small and medium-sized enterprises (SMEs) while generating more financial resources; the streamlining of organizational structures, with greater emphasis on marketing and outreach units; strengthened linkages with universities as regards both research and development and extension services; the promotion of networking, alliances and partnerships; and the involvement of research and development institutes in promoting technology transfer agreements.

Members of the Commission elaborated further on several specific issues. A substantially increased emphasis was needed in assisting SMEs to identify their technological needs and learn how to take advantage of the research and development system, including matters related to technical assistance and support services. Such an emphasis reinforced the need to refocus research and development on adaptive work aimed at incremental innovations that would make products and processes more competitive. Training more technicians and workers on the shop floor was vital in that regard. Poor countries could not afford significant amounts of very limited resources for generic research but should instead seek solutions to their local problems by adapting best practice techniques that were already available in the international market-place. In the course of structural adjustment reforms, many developing countries, particularly the least developed countries, would be unable to meet the competitive challenges of the 1990s without greater international assistance in building up the supportive infrastructure needed to make it attractive for domestic and foreign enterprises to invest in the modernization of industry.

The countries with economies in transition, while sharing problems similar to those of many developing countries, were faced with unique challenges arising from their historical circumstances. In parallel with the restructuring of their economies, they were under pressure to redirect and convert the utilization of their vast scientific and technological infrastructure towards more market-oriented activities and the creation of environmentally sounder industrial systems. Attention was drawn to the potentially adverse effects of the exodus of scientific and technical personnel from countries with economies in transition as well as from developing countries. Discussions were held on the establishment of venture capital funds, such as the fund established by UNESCO in Africa in 1994.

Information technologies

The suggestion that the topic of information technology for development should be selected as a substantive theme for the forthcoming inter-sessional period received unanimous support. A number of members stressed that the Commission should establish a panel to examine the diffusion and application of information technology in developing countries and countries with economies in transition, its implications for social and economic development, and its role in endogenous technological capability-building. The efficiency and affordability of information

technology had created unparalleled opportunities for developing countries and countries in transition to deal with information more efficiently and effectively than ever before. It was stressed that the establishment of an international environment conducive to easier access to information technology and the infrastructure necessary for its use by countries that were currently marginalized was an important challenge that should be addressed by the international community.

While acknowledging that various pertinent issues had been identified in the above-mentioned note on the subject by the UNCTAD secretariat, members considered that closer attention should be given to three additional matters: (a) the relationship between information technology and education at the primary, secondary and tertiary levels; (b) the effects of information technology on cultural values and (c) the public policy necessary to foster the diffusion and application of information technology. One solution might be to rely on market mechanisms, but a number of aspects of the diffusion of information technology, particularly the development of essential infrastructures, required a regulatory environment that fostered and protected competition and private-sector investments while safeguarding consumer interests.

The importance of the diffusion of information technology in developing countries and the need for action-oriented activities in that area were highlighted. Should the Commission decide to adopt information technology as one of its substantive themes for future work, the activities undertaken in that respect should go beyond panel and working group discussions and resolutions to include practical suggestions and promote the establishment of projects to assist developing countries in gaining better access to global information systems. The United Nations could play a key role in supporting the development of the global information infrastructure and could assist developing countries and countries with economies in transition in participating and using that infrastructure for sustainable development.

Action taken by the Commission

1. Information and communication technology for scientific and technological development

9. At its 13th meeting, on 24 May, the Commission had before it a draft resolution (E/CN.16/1995/L.2) entitled "Information and communication technology: a key for scientific cooperation and technology transfer", submitted on behalf of Austria, Belarus, Bulgaria, Chile, Costa Rica, Ireland, Jamaica, Malaysia, China, the Russian Federation, Togo, the United Republic of Tanzania and Viet Nam, on the basis of informal consultations. The draft resolution read as follows:

"Information and communication technology: a key for scientific cooperation and technology transfer

"The Commission on Science and Technology for Development,

"Recognizing information and communication as the most important requisites for planning, development and decision-making in science and technology matters as well as for social progress,

"Reacting to the urgent need of developing countries and countries with economies in transition for full access to the information available through electronic servers in industrialized countries and at international organizations,

"Emphasizing the outstanding importance of affordable, direct and rapid communication between scientific and research organizations in developing countries, countries with economies in transition and industrialized countries,

"Noting with interest the success of electronic networking in development cooperation as exemplified, inter alia, by the Austrian-South East Asian University Network,

"1. Proposes to form a working panel of the Commission to:

"(a) Analyse and elaborate all implications of information and communication technology for scientific and technological development for the benefit of developing countries and countries with economies in transition;

"(b) Draw up recommendations on how to utilize and expand available installations for electronic information and communication for the benefit of national and international organizations as well as for the benefit of human resources development in developing countries and countries with economies in transition;

"(c) Make proposals on how information and communication technology should be employed so as to ensure that the Commission on Science and Technology for Development establishes rapid and efficient cooperation with other United Nations agencies, as well as among scientific and research institutions in all countries;

"2. Requests the Secretary-General of the United Nations to invite national Governments and international organizations to give the highest priority to full and free access to the Internet, especially by providing support to scientific organizations and by encouraging the financing of related investments from all sources in order to ensure the benefits of that access to developing countries and countries with economies in transition as soon as possible, and also requests, as a first and immediate step, that national Governments and international organizations facilitate appropriate electronic communications among all institutions engaged in science and technology for development."

10. At the same meeting, the representative of Jamaica made a statement on behalf of the sponsors of the draft resolution.

11. At the same meeting, the Commission decided to take no action on the draft resolution.

12. At the same meeting, statements were made by the representatives of the Russian Federation and Jamaica.

2. Dissemination of and public awareness on reports of main panels of the Commission on Science and Technology for Development

13. At the 13th meeting, on 24 May, the Commission had before it a draft resolution (E/CN.16/1995/L.5) entitled "Dissemination of and public awareness on reports of main panels of the Commission on Science and Technology for Development", submitted by the Chairman on the basis of informal consultations.

14. At the same meeting, the Commission adopted the draft resolution (for the final text, see chap. I, sect. C, resolution 2/2).

3. Science and technology for development

15. See chapter I, section A, draft resolution and also chapters II, III, V, VI and VII.

Chapter V

ACTION ARISING FROM THE FIRST SESSION OF THE COMMISSION

1. The Commission considered item 5 of its agenda at its 7th meeting, on 18 May 1995. It had before it the following document:

Note by the UNCTAD secretariat transmitting the final report of the Ad Hoc Working Group on the Interrelationship between Investment and Technology Transfer (E/CN.16/1995/10).

2. At the same meeting, the Officer-in-Charge of the Division for Science and Technology made an introductory statement.

3. At the same meeting, a statement was made by the representative of UNIDO.

4. The Chairman's summary of the general discussion is set out below.

Chairman's summary of the general discussion

The above-mentioned report was introduced by the Officer-in-Charge of the Division for Science and Technology of UNCTAD. It contained the main findings, general conclusions and recommendations of the Working Group arising from its activities during its three sessions, as well as a detailed account of the informal discussions that took place during its two substantive sessions.

The work programme of the Working Group covered the following issues: (a) investment flows, technology transfer and competitiveness; (b) technological capacity-building in developing countries, particularly the least developed countries, and in countries with economies in transition; and (c) transfer and development of environmentally sound technologies.

The Working Group had offered a wide range of findings and conclusions and had identified a number of areas for international cooperation, many of which required immediate action while others required further analysis and consideration at the intergovernmental level.

In recognizing the special problems and needs of the least developed countries, the Working Group requested the Secretary-General of UNCTAD to implement a special project designed to foster technological capacity-building within these countries, depending on the availability of expertise and other support to be provided by the international community.

Other specific action concerned the strengthening of cooperation among Governments, enterprises and the academic sector at large in the process of capacity-building and the establishment of a world dialogue for the purpose of exchanging views and formulating proposals for such cooperation.

In recognizing the importance of small and medium-sized enterprises in fostering entrepreneurship and in the generation and dissemination of environmentally sound technologies, the Working Group sought assistance for supporting such enterprises in developing countries through the transfer of

technology and managerial skills and the development of the framework and mechanisms for technology partnerships between enterprises.

Action taken by the Commission

Science and technology for development

5. See chapter I, section A, draft resolution and also chapters II, III, IV, VI and VII.

Chapter VI

FINANCING SCIENCE AND TECHNOLOGY FOR DEVELOPMENT

1. The Commission considered agenda item 6 in conjunction with agenda item 3 at its 9th meeting, on 19 May 1995. For the document before the Commission under this item, see chapter III, paragraph 1 (c).

2. At the same meeting, the Chief of the Human Development, Institutions and Technology Branch, Division of Sustainable Development, Department for Policy Coordination and Sustainable Development, made an introductory statement.

3. At the same meeting, statements were made by the representatives of Chile, Jamaica, Pakistan, China, Japan, Germany, India, Netherlands, the United States of America and the Niger.

4. At the same meeting, a statement was made by the representative of UNDP.

5. For the Chairman's summary under this agenda item, see chapter III, paragraph 6.

Action taken by the Commission

Science and technology for development

6. See chapter I, section A, draft resolution and also chapters II, III, IV, V and VII.

Chapter VII

SCIENTIFIC AND TECHNOLOGICAL ASPECTS OF SUSTAINABLE DEVELOPMENT AND THE CONVERSION OF MILITARY CAPACITIES

1. The Commission considered item 7 of its agenda at its 8th meeting, on 19 May 1995. It had before it the following documents:

(a) Report of the Secretary-General on progress achieved and problems encountered in the application of science and technology for sustainable development (E/CN.16/1995/12);

(b) Report by the UNCTAD secretariat entitled "Scientific and technological aspects of the conversion of military capacities for civilian use and sustainable development: an overview of main issues" (E/CN.16/1995/13).

2. At the same meeting, the Chief of the Human Development, Institutions and Technology Branch, Division of Sustainable Development, Department for Policy Coordination and Sustainable Development, made an introductory statement under agenda sub-item 7 (a).

3. At the same meeting, statements were made by the representatives of Egypt, Chile, Jamaica, the United Kingdom of Great Britain and Northern Ireland, Pakistan, the United States of America, Viet Nam, Togo, Romania, Germany and Japan.

4. At the same meeting, the Officer-in-Charge of the Division for Science and Technology of UNCTAD, made an introductory statement under agenda sub-item 7 (b).

5. At the same meeting, statements were made by the representatives of Belarus, Ethiopia, Jamaica, Chile, Germany, Ireland, Ukraine, the Russian Federation, the United States of America, the Niger and Burundi.

6. The Chairman's summary of the general discussion is set out below.

Chairman's summary of the general discussion

Scientific and technological aspects of sustainable development

The Commission on Science and Technology for Development reiterated its support for the cooperation with the Commission on Sustainable Development that had taken place within the context of the Panel on Science and Technology for Integrated Land Management, and noted that that cooperation had also been welcomed by the Commission on Sustainable Development. Moreover, in addition to chapters 16, 34 and 35 of Agenda 21, on the environmentally sound management of biotechnology, the transfer of environmentally sound technology, cooperation and capacity-building, and science for sustainable development, respectively, it was noted that further aspects of science and technology could be found in many other sectoral chapters of Agenda 21.

In responding to the recommendation of the Economic and Social Council at its substantive session of 1994, in which the Council had called for a

closer working relationship between the two commissions, the Commission felt that areas in which it could contribute to the work of the Commission on Sustainable Development should be as specific as possible and linked to its own inter-sessional work programme. While the Commission on Sustainable Development had not specified any particular subjects for future cooperation between the two commissions, it was felt that that could be the subject of future consultations between the two bureaux based on a list of possible subjects to which the Commission would be able to make a substantive contribution. The following topics were suggested for further consideration by the Commission in that regard:

(a) Assessment of scientific and technological capacities for sustainable development in relation to selected chapters of Agenda 21;

(b) Information technologies with a direct bearing on sustainable development issues, such as access to information on environmentally sound technologies;

(c) Specific aspects of energy development and application that had not been sufficiently dealt with in other bodies in the United Nations system, such as technologies and systems that promoted energy efficiency. The Commission felt, however, that further examination by an informal group of interested members of what had been done by other bodies both within and outside the United Nations system was necessary before deciding whether that could be a possible future topic;

(d) Intellectual property rights and public domain technology related to the transfer and use of environmentally sound technologies.

As for the possibility of setting up a joint working group between the two commissions, the feasibility of such a joint undertaking and the modalities for its cooperation could be further discussed between the two bureaux.

Technological aspects of the conversion of military capacities

The importance of the issue of conversion on the agenda of the Commission was highlighted in view of its global, political and economic relevance. Concern was expressed about the particular needs of the poorer countries and the fact that the wide dissemination of weapons throughout those countries was having a destabilizing effect, as well as about the lack of disarmament efforts in some parts of the world. In that respect, the need for increased funding and for technical and political support of work on conversion aspects by the international community was emphasized.

A certain lack of coordination and of information exchange with regard to activities concerning conversion within and outside the United Nations system was perceived. The question of whether the issue of conversion should become one of the substantive themes for the third session of the Commission was discussed. Alternative possibilities that were considered included addressing continued work on conversion matters to the regional commissions or to the UNCTAD Ad Hoc Working Group on Structural Adjustment for the Transition to Disarmament. The role of universities and non-governmental organizations in their respective areas of concern was also highlighted.

Action taken by the Commission

Science and technology for development

7. See chapter I, section A, draft resolution and also chapters II, III, IV, V and VI.

Chapter VIII

ELECTION OF THE CHAIRPERSON AND OTHER OFFICERS FOR THE THIRD SESSION OF THE COMMISSION

1. The Commission considered item 8 of the agenda at its 10th and 12th meetings, on 22 and 24 May 1995.

2. At its 10th meeting, on 22 May, the Chairman made a statement.

3. At its 12th meeting, on 24 May, the Commission elected by acclamation the following officers for its third session:

Chairman: J. George Waardenburg (Netherlands)

Vice-Chairmen: Messanvi Gbeassor (Togo)

S. M. Qureshi (Pakistan)

Marina Ranga (Romania)

Arnoldo Ventura (Jamaica)

Chapter IX

PROVISIONAL AGENDA FOR THE THIRD SESSION

1. The Commission considered item 9 of its agenda at the 10th, 11th and 13th meetings, on 22, 23 and 24 May 1995. It had before it an informal paper by the Secretariat containing the draft provisional agenda for the third session.

2. At the 10th meeting, on 22 May, the Commission had before it a working paper containing the provisional agenda for the third session of the Commission.

3. At the same meeting, the representatives of Pakistan, Saudi Arabia, the United States of America, Bulgaria, Burundi and Germany made statements.

4. At the 11th meeting, on 23 May, the Chairman made a statement.

5. At the 13th meeting, on 24 May, the Commission had before it a revised working paper containing the provisional agenda and documentation for the third session of the Commission, submitted on the basis of informal consultations.

6. At the same meeting, the Commission approved the provisional agenda and documentation for its third session and decided to entrust the Secretariat with the task of completing the provisional agenda, in the light of the resolutions and decisions adopted by the Commission at its second session, for submission to the Economic and Social Council (see chap. I, sect. B, draft decision).

Chapter X

OTHER MATTERS

A. Working methods of the Commission on Science and Technology for Development

1. At the 13th meeting, on 24 May 1995, the Commission had before it an informal paper containing a draft decision entitled "Working methods of the Commission on Science and Technology for Development", submitted by the Chairman on the basis of informal consultations.

2. At the same meeting, following informal consultations, the Commission adopted the draft decision as contained in the informal paper (see chap. I, sect. C, decision 2/101).

B. Synchronization of the terms of members of the Commission on Science and Technology for Development

3. At the same meeting, the Commission had before it an informal paper containing a draft decision entitled "Synchronization of the terms of members of the Commission on Science and Technology for Development", submitted by the Chairman on the basis of informal consultations.

4. At the same meeting, following informal consultations, the Commission adopted the draft decision as contained in the informal paper (see chap. I, sect. C, draft decision 2/102).

5. After the adoption of the draft decision, the Chairman made the following statement: "The acceptable solution to the issue of the timing of the membership of the Commission would be the extension of its current mandate up to the end of the third session and to continue thereafter on a regular basis".

Chapter XI

ADOPTION OF THE REPORT OF THE COMMISSION ON ITS SECOND SESSION

1. At its 13th meeting, the representative of the United States of America proposed an amendment to paragraphs 2 and 3 of the draft report, to make them more concise.

2. At the same meeting, the Commission adopted the report on its second session (E/CN.16/1995/L.1), as amended during the discussion.

Chapter XII

ORGANIZATION OF THE SESSION

A. Opening and duration of the session

1. The Commission held its second session at the United Nations Office at Geneva from 15 to 24 May 1995. The Commission held 13 meetings and a number of informal meetings.

2. In his introductory statement, the Officer-in-Charge of UNCTAD reviewed recent trends in the global economy and their interfaces with the rapid scientific and technological changes currently occurring. He drew attention to the emergence of new technologies and noted that the distinction between science and technology was becoming increasingly blurred. He emphasized that the role of Governments in formulating appropriate policies and incentives would be vital in harnessing science and technology for growth and development. The Commission on Science and Technology for Development, as a global forum for the elucidation of science and technology issues, should play a major role in their understanding and in the identification of viable policy solutions for both national action and international cooperation.

3. The Chairman of the Commission on Science and Technology for Development noted that the work of the second session of the Commission could start with optimism since the new working style of the Commission initiated after its first session represented a mechanism mobilizing a high degree of personal commitment, energy and creativity. The Commission's Bureau had been actively involved in all decisions taken during the inter-sessional period of work and had become the real motive force in these activities. The members of the Commission, for their part, had been actively working in teams, demonstrating that a dialogue was an essential part of the process of finding answers to the issues discussed. In turn, the secretariat had confirmed its important role in working side by side with the Commission members. The inter-sessional work and its results had been made possible thanks to the invaluable support provided by the Dutch Government, IDRC of Canada and many other centres, foundations, institutions and personalities who expressed their thrust in the new working style, to which the specialized agencies of the United Nations system were also contributing by their participation.

B. Attendance

4. In accordance with General Assembly resolution 46/235, the Commission is composed of 53 States Members of the United Nations, elected by the Economic and Social Council for a term of four years on the principle of equitable geographical distribution.

5. The session was attended by 41 States members of the Commission. Observers for other States Members of the United Nations and for non-member States as well as representatives of specialized agencies and intergovernmental and non-governmental organizations also attended. A list of participants is given in annex I to the present report.

C. Election of officers

6. The Commission, at its first session, had elected, by acclamation, the following officers for its second session:

Chairman: Oscar Serrate Cuéllar (Bolivia)

Vice-Chairmen: Vladimir A. Labounov (Belarus)

Mohammed M. El Halwagi (Egypt)

J. Dhar (India)

J. G. Waardenburg (Netherlands)

7. At its 7th meeting, on 18 May, the Commission elected, by acclamation, Dr. Vemuri Ramesam (India) as Vice-Chairman of the Commission for the unexpired term, replacing Dr. J. Dhar (India), in accordance with the provisions of rule 19 of the rules of procedure of the functional commissions of the Economic and Social Council.

D. Agenda and organization of work

8. At the 1st meeting, on 15 May, the Commission adopted the provisional agenda contained in document E/CN.16/1995/1.

9. At the same meeting, the Commission approved the organization of work of the session (see E/CN.16/1995/1, annex).

Annex I

ATTENDANCE

Members

Austria:	Bernd Michael Rode, Elke Atzler, Suzanne Pichl
Belarus:	Vladimir A. Labounov, Vladimir V. Vantsevich, Aleg Ivanov
Bolivia:	Oscar Serrate Cuéllar, Jaime Quispe, Dalcy Cabrera Rios
Brazil:	Gilberto V. Saboia, Luiz Guilherme de Moraes, Ana Lelia Beltrame
Bulgaria:	Valéry Yotov, Nikolay Trifonov
Burundi:	Stanislas Ruzenza, Aloys Negamiye
Chile:	Miguel Gonzalez, Rafael Correa
China:	Wang Shaoqi, Kong Deyong, Zhang Zhiqin, Fan Lijun
Colombia:	Alberto Gonzalez, Fernando Chaparro, Carmen Silva
Costa Rica:	Manuel Dengo-Benavides, Marcela Mendéz-Díaz
Denmark:	Niels Busch
Egypt:	Mohamed Mokhtar El-Halwagy
Ethiopia:	Shumu Tefera, Yousuf Ibrahim Omar, Mussie Delelegn Arega
Germany:	Wolfgang Hillebrand, Azel Volhard, Christina Schubert
Guatemala:	Mariella Velez de Garcia, Federico Urruela Prado, Ricardo Putzeys
India:	Vemuri Ramesam, Ajit Kumar
Ireland:	Niall Holohan
Jamaica:	Arnoldo Ventura, Richard A. Pierce, Vivia Betton, Julia Stewart
Japan:	Mikoto Usui, Mitsunori Namba
Jordan:	Khaled Elshuraydeh, Ibrahim Awadeh
Kuwait:	Jasem Besharah
Malaysia:	Haron Siraj, Mohamed Noordin Hassan, Tan Seng Sung, Rohana Ramli
Marshall Islands:	Espen Ronneberg

Mexico:	Rafael Cervantes Villareal
Morocco:	Abdelhafid Boutaleb Joutei, Abdeljebbar Brahime
Netherlands:	J. G. Waardenburg, Marcel van der Kolk
Niger:	Garro Gado
Nigeria:	Robert Ajayi Boroffice, Bashir A. Musa
Pakistan:	S. M. Qureshi, Irfan Baloch
Philippines:	Jaime Yambao
Romania:	Marina Ranga, Gheorghe Vlad
Russian Federation:	Alexandre Markov, Alexandre Petrov
Saudi Arabia:	Abdullah Ben Ahmed Al-Rasheed, Saud Ben Abdul Aziz Al-Mubarak
Spain:	Luis Fernando de Segovia, Armando Andrada, Rosa Sancho
Togo:	Messanni François Gbeassor
Ukraine:	Volodymyr D. Parkhomenko
United Kingdom of Great Britain and Northern Ireland:	Geoffrey Oldham, Ian Danson
United Republic of Tanzania:	Titus Mteleka, M. W. Mangachi, C.H. Mvula
United States of America:	Joan Dudik-Gayoso, Stephen Schlaikjer, Harlan Cohen, Gerald Eichinger, Ethel Rollins-Cross
Uruguay:	Teodoro Kunin, Carlos Amorin
Viet Nam:	Le Qui An, Vu Huy Tan, Ngo Thi Lien

States Members of the United Nations represented by observer

Afghanistan, Algeria, Bangladesh, Democratic People's Republic of Korea, Ecuador, Greece, El Salvador, France, Honduras, Hungary, Indonesia, Iran (Islamic Republic of), Italy, Kenya, Madagascar, Republic of Korea, Syrian Arab Republic, Thailand, Tunisia

Non-Member States represented by observer

Switzerland

United Nations

Economic Commission for Africa, Economic and Social Commission for Asia and the Pacific, Economic and Social Commission for Western Asia, United Nations Development Programme, United Nations Conference on Trade and Development, United Nations Population Fund, Department for Policy Coordination and Sustainable Development of the United Nations Secretariat

Specialized agencies

International Labour Organization, Food and Agriculture Organization of the United Nations, United Nations Educational, Scientific and Cultural Organization, World Health Organization, World Meteorological Organization, United Nations Industrial Development Organization, International Atomic Energy Agency

Intergovernmental organizations

Organization of African Unity, Organisation for Economic Cooperation and Development, Organisation of the Islamic Conference

Non-governmental organizations

World Federation of United Nations Associations, International Committee for European Security and Cooperation, World Safety Organization

Guest speakers

Venice Gouda, Shirley Malcom, Juan Rada, Michel Bosco, Titus Adeboye, Charles Cooper, Geoffrey Oldham, Masafumi Nagao

Experts

Elizabeth MacGregor, Farkonda Hassan, Shirley Malcom

Annex II

AGENDA OF THE SECOND SESSION

1. Adoption of the agenda and other organizational matters.

2. Substantive themes:

   (a) Technology for small-scale economic activities to address the basic needs of low-income populations;

   (b) The gender implications of science and technology for developing countries;

   (c) The science and technology aspects of the sectoral issue to be discussed by the Commission on Sustainable Development in 1995.

3. Coordination of activities in science and technology for development:

   (a) Coordination and cooperation in science and technology within the United Nations system;

   (b) Progress report on endogenous capacity-building at national and regional levels;

   (c) Cooperation in the field of technology assessment and forecasting;

   (d) Review of operational activities of the United Nations system;

   (e) Interaction with organizations outside the United Nations system.

4. Reports of the ad hoc panels.

5. Action arising from the first session of the Commission.

6. Financing science and technology for development.

7. Scientific and technological aspects of:

   (a) Sustainable development;

   (b) Conversion of military capacities.

8. Election of the chairperson and other officers for the third session of the Commission.

9. Provisional agenda and organization of work for the third session of the Commission.

10. Other matters.

11. Adoption of the report of the Commission on its second session.

Annex III

LIST OF DOCUMENTS BEFORE THE COMMISSION AT ITS SECOND SESSION

Document symbol	Agenda item	Title or description
E/CN.16/1995/1	2	Provisional agenda
E/CN.16/1995/2	2 (a)	Report of the Panel on Technology for Small-Scale Economic Activities to Address the Basic Needs of Low-income Populations, entitled "Science and technology for basic needs: a bridge"
E/CN.16/1995/3	2 (b)	Report of the Panel on the Gender Implications of Science and Technology for Developing Countries, entitled "Science and technology for sustainable human development: the gender dimension"
E/CN.16/1995/4	2 (c)	Report of the Panel on the Science and Technology Aspects of the Sectoral Issue to be Discussed by the Commission on Sustainable Development in 1995, entitled "Science and technology for integrated land management"
E/CN.16/1995/5	2	Overview of the reports of the panels
E/CN.16/1995/6	3	Coordination mechanisms in science and technology within the United Nations system: note by the Secretariat
E/CN.16/1995/7	3	Activities of the United Nations system in the field of science and technology for development, including cooperation in technology assessment: report by the UNCTAD secretariat
E/CN.16/1995/8	4	Strengthening of linkages between the national research and development systems and industrial sectors: report of the Panel of Experts on the Contribution of Technologies, including New and Emerging Technologies, to Industrialization in Developing Countries
E/CN.16/1995/9 and Corr.1 and 2	4	Information technologies for development: note by the UNCTAD secretariat
E/CN.16/1995/10	5	Note by the UNCTAD secretariat transmitting the final report of the Ad Hoc Working Group on the Interrelationship between Investment and Technology Transfer
E/CN.16/1995/11	6	Note by the UNCTAD secretariat transmitting the report of the Consultative Meeting on a Coalition of Resources for Science and Technology for Development

Document symbol	Agenda item	Title or description
E/CN.16/1995/12	7 (a)	Progress achieved and problems encountered in the application of science and technology for sustainable development: report of the Secretary-General
E/CN.16/1995/13	7 (b)	Report by the UNCTAD secretariat entitled "Scientific and technological aspects of the conversion of military capacities for civilian use and sustainable development: an overview of the main issues"
E/CN.16/1995/L.1	11	Draft report of the Commission
E/CN.16/1995/L.2	4	Draft resolution entitled "Information and communication technology: a key for scientific cooperation and technology transfer"
E/CN.16/1995/L.3	2, 3, 4, 5, 6, 7	Science and technology for development: draft resolution
E/CN.16/1995/L.4	2 (b)	Advisory Board on Gender Issues: draft resolution
E/CN.16/1995/L.5	2, 4	Dissemination of and public awareness on reports of main panels of the Commission on Science and Technology for Development: draft resolution
E/CN.16/1995/INF/1		List of participants
E/1993/31-E/CN.16/1993/12 and Add.1		Report of the Commission on Science and Technology for Development on its first session
E/1994/70		Division of labour and coordination within the United Nations system in the field of science and technology: report of the Secretary-General
E/CN.17/1995/16		Science for sustainable development: report of the Secretary-General
E/CN.17/1995/17		Transfer of environmentally sound technologies, cooperation and capacity-building: report of the Secretary-General
E/CN.17/1995/20		Environmentally sound management of biotechnology: report of the Secretary-General
UNCTAD/DST/7		Report of the Workshop on Selected Cooperation Aspects for Technological Capacity-building in Developing Countries
TD/B/40(2)/17 TD/B/WG.5/12		Final report of the Ad Hoc Working Group on the Interrelationship between Investment and Technology Transfer to the Trade and Development Board